XXII. Additions and corrections to my Catalogue of the Lepidoptera Rhopalocera of Trinidad (1904). By W. J. Kaye, F.E.S.

[Read October 1st, 1913.]

PLATE XXX.

TEN years have nearly elapsed since I published in the Transactions of this Society for 1904 (pp. 159-231), "A catalogue of the Lepidoptera Rhopalocera of Trinidad." In that interval a very large number of additional records have been made, over one hundred and forty fresh species being now added to the list, bringing the total up to four hundred and thirty species. Large as this number is, there will doubtless be some additions yet to be made especially from the southern end of the Island, which has been very little explored entomologically. Many interesting forms remain probably to be discovered in this southern district with its totally different climate to the northern side of the Island. Many of the species found there are not to be taken in the north, such as Heliconius wallacei, Heliconius antiochus alba, Papilio sesostris, Papilio belus varus, Helicopis cupido and several others, all of which belong to the Guiana region. It is possible that some intermediate forms, especially in the genus Heliconius, will be discovered which will link up some Venezuelan forms with those of Guiana. Heliconius antiochus salvinii might be expected to occur with the yellow band in the hind-wing in a transitional stage, for the subspecies is an inhabitant of the lower Orinoco. In the dense shore forest of the south coast one might certainly meet with true Heliconius melpomene and perhaps some of its very many named forms.

The bulk of the additions to the list are to be found in the Erycinidae and Hesperidae. Many interesting records have been made, however, of some of the larger and more conspicuous species, such as Eunica orphise, E. malvina, the very rare Dynastor macrosiris, which was taken by Sir Gilbert Carter at Government House; the two new subspecies of Adelpha, A. phylaca trinita, A. velia trinina, TRANS, ENT, SOC. LOND, 1913.—PART III. (JAN.)

in addition to A. eubaea and A. melona, bringing the number of indigenous species of this genus up to seven. Chlorippe laure was only discovered this year by Mr. K. St. A. Rogers to the north of Quenam Bay.

Many corrections have been made in nomenclature, as well as to sundry misstatements that somehow crept into

the original paper.

To Mr. P. L. Guppy I owe practically all the additional facts of life-histories, as well as various notes and records of many imagines. Very many collections, both small and large, made by various people have been examined in the past ten years, and almost without exception some fresh species have been detected in each; often even from the neighbourhood of Port of Spain fresh species turn up that have not been detected before. In the case of the larger and more conspicuous species this certainly points to fresh accessions from Venezuela. One of the latest additions is that of *Pyrameis cardui*, which, with *Hypolimnas misippus* already recorded, one can claim to be the most roving butterflies in the world and strange company for the Neotropical fauna.

Species in brackets are recorded in the original

catalogue.

Family DANAIDAE.

Subfamily ITHOMIINAE.

[6. Melinaea tachypetis.]

Although decidedly scarce this species is doubtless a resident in the Island, and has been taken several times in the past few years. Mr. F. Birch secured one at Tabaquite in August 1904, and this specimen is now in my collection. There are two specimens in the late Mr. H. J. Adams' collection at Enfield that were taken in St. Ann's Valley by Mr. G. E. Tryhane.

[11. Pteronymia nise.]

This species which is the 3 of selene, Cramer, rightly belongs to the genus Calloleria. The only further captures of the species I have heard of are: 1 3 Caparo Valley, July 16, 1904 (F. Birch); one or two in 1906 (Caracciolo). The species is doubtless gregarious and local, and its exact habitat probably remains to be discovered.

[12. Hymenitis ocalea.]

This species rightly belongs to the genus Hypoleria. It is widely distributed and common on the northern hills.

Pteronymia aletta.

Ithomia aletta, Hew., Ex. Butt., i, t. 6, p. 31 (1854).

Specimens in Mr. H. J. Adams' collection which were taken in St. Ann's Valley by G. E. Tryhane. Caracciolo took the species also in 1906.

Range. VENEZUELA.

DIRCENNA MELANIDA.

Papilio melanida, Cram., Pap. Ex., iii, t. 231, F. Q. Papilio lenea, Cram., Pap. Ex., iii, t. 231, D. 3.

A & secured by Sir Gilbert Carter at the Pitch Lake in 1907. It is quite likely that many species new to the list may still be detected from this remarkable region. Range. Brit. Guiana.

Family MORPHIDAE.

Subfamily BRASSOLINAE.

Brassolis sophorae.

Papilio sophorae, Linn., Syst. Nat. (10), p. 471, No. 83 (1758).

Brassolis sophorae sophorae, Stichel, Gen. Ins., Fasc. 20, p. 7.

Brassolis sophorae, Guppy, Board of Agric. Circular, 5, pp. 19-21, pl. 1. Life history.

The "coconut butterfly."

Taken by Mr. Caracciolo in 1906. Mayaro (F. W. Urich) and in many localities in the larva stage quite recently. Range. Guiana to South Brazil.

[14. OPSIPHANES FABRICII.]

The name fabricii can no longer stand for this species, cassina antedating it. The synonymy stands thus:

Caligo fabricii, Bdv., Lep. Guat., p. 54 (1870). Papilio cassiae, Fab. (nec Linn.), Syst. Ent., p. 483, No. 178 (1775).

Opsiphanes cassina, C. and R. Feld., Wien. Ent. Mon., vol. 6, p. 122, No. 141 (1862).

Opsiphanes cassina merianae, Stichel, Berl. Ent. Zeit., vol. 46, p. 518 (1901).

Opsiphanes fabricii, Kaye, Trans. Ent. Soc., p. 165

(1904) (Trinidad, loc. err.). Opsiphanes cassina fabricii, Stichel, Gen. Ins., Fasc. 20,

Opsiphanes cassina fabricii, Stichel, Gen. Ins., Fasc. 20, p. 21 (Trinidad, loc. err.).

The subspecies of O. cassing that occurs in the Island is therefore merianae.

[16. Caligo Eurylochus.]

The var. minor of this species described on pp. 165 and 166 was not a var. of eurylochus, but of C. teucer. The subspecies was, however, earlier described in the same year by Stichel—in the Insekten-Börse. The synonymy, therefore, stands thus:—

Caligo teucer insulanus, Stichel, Ins. Börse, vol. 21, p. 21, No. 25 (1904).

Caligo teucer insulanus, Stichel, Gen. Ins., Fasc. 20, p. 35 (1904).

Caligo eurylochus var. minor, Kaye, Trans. Ent. Soc. Lond., p. 165, No. 16 (1904).

Caligo teucer insulanus, Fruhs., in Seitz, Macro-Lep., Div. II, vol. v, p. 317.

Caligo Eurilochus Phryasus.

Caligo eurilochus phryasus, Fruhs., in Seitz, Macro-Lep., Div. II, vol. v, p. 322 (1912).

This species is the rarest of the genus in Trinidad. The small insular form was only recently described by Fruhstorfer from a specimen taken at Maracas Fall by A. H. Fassl. The insect has also been taken round Port of Spain by both Caracciolo and G. E. Tryhane. The range of eurilochus in its many subspecies ranges from North to South and from East to West over nearly the whole of Tropical America at low elevations. Larva on Banana (Fruhstorfer).

The C. eurylochus var. minor recorded in 1904 was not C. eurilochus but a form of C. teucer. See under C. teucer.

[Caligo saltus.]

In the Genera Insectorum, Fasc. 20, p. 15, Stichel treats this insect as a subspecies of Caligo ilioneus under the name polyxenus, a form described by him a year previously in the Insecten Börse, vol. 20, p. 389, No. 5, 1903. If his type specimen came from Trinidad my name would become a synonym of polyxenus. But Fruhstorfer in "Seitz Macrolepidoptera of the World," vol. v, Div. II, p. 319, 1912, treats polyxenus and saltus as distinct subspecies. For the present I follow Fruhstorfer, and adopting the trinomial system of nomenclature the insect would be known as Caligo ilioneus saltus.

Dynastor macrosiris.

Dynastor macrosiris, Westw., Gen. Diurn. Lep., pl. lix,

Dynastor macrosiris macrosiris, Stichel, Gen. Ins., Fasc. 20, p. 10.

Taken at Government House, Port of Spain, by Sir Gilbert Carter in 1907, and by Mr. P. L. Guppy, jun., at the same locality. Always a very rare species.

Range, Guiana; Mexico; Honduras; Colombia; BOLIVIA.

Family NYMPHALIDAE.

Subfamily ACRAEINAE.

[20. ACTINOTE ANTEAS.] [21. ACTINOTE ALALIA.]

These two Actinote species recorded in the catalogue as two distinct species are most probably the same. Actinote alalia was wrongly identified. Felder's type at Tring is quite another species. Dr. Jordan has recently described in Seitz the Trinidad insect hitherto recorded as A. alalia as trinitatis, treating it as a subspecies of Actinote pellenia. Typical A. pellenia, Hüb., occur with the subspecies, and Dr. G. B. Longstaff secured an intermediate form on April 2, 1907, about four miles from Port of Spain. species seems to be locally quite common. Mr. H. Caracciolo has secured a long series. Mr. H. A. Trechman, and more recently Mr. K. St. A. Rogers, caught a few in January 1913.

Subfamily HELICONINAE.

HELICONIUS NUMATA NUMATA.

Heliconius numatus numatus, Stichel, Gen. Ins., Fasc. 37, p. 10.

Heliconius numata, Cram., Pap. Ex., vol. 4, p. 17, f. C. D., 1780; p. 251 (1782).

Range. Guiana.

Sir Ğilbert Carter took a specimen of this species at the Pitch Lake. It agrees with the form named *guiensis* by Riffarth.

HELICONIUS ETHILLA METALILIS.

Heliconius metalilis, Butl., Cist. Ent., i, p. 167 (1873).Heliconius ethilla metalilis, Stichel, Gen. Ins., Fasc. 37, p. 13.

Heliconius eucoma metalilis, Riff., Berl. Int. Zeit., vol. 46, p. 43; Gatt. Helie., vol. 2, p. 19.

Heliconius metabilis, Kirby, Cat. Diurn. Lep., Suppl., p. 722 (1877).

In September 1906 Mr. P. L. Guppy, jun., caught at Blanchisseuse on the northern shore of the Island, a specimen of this subspecies that has its home in the mainland in Venezuela and Colombia. *Metalilis*, however, can, in Trinidad, only be regarded as an aberration of *ethilla*, such a dark form being of very rare occurrence, although intermediate specimens are less rarely taken.

Range. Venezuela; Colombia.

[25. Heliconius melpomene.]

Since the publication of the Trinidad Catalogue in 1904, it has become less and less certain about the occurrence of true melpomene, until it seems necessary to remove the species from the list. The specimens originally thought to be this species have proved to be large specimens of Heliconius amaryllis euryades. It is very probable, however, that amaryllis and melpomene will one day be proved to be one variable species. H. amaryllis euryades runs exceedingly close to H. melpomene melpomene, and the genitalia are scarcely separable.

HELICONIUS WALLACEI WALLACEI.

Heliconius wallacei, Reak., Proc. Ac. N. Sc. Phil., p. 242 (1866).

Heliconius wallacei wallacei, Stichel, Gen. Ins., Fasc. 37, p. 36 (1906).

Range. Guiana; Lower Amazons.

Not rare near the Pitch Lake (Sir G. Carter). Arima 2-500 ft., Jan. 15, 1913 (K. St. A. Rogers).

HELICONIUS SARA THAMAR.

Heliconius caerulea thamar, Hübn., Ex. Schmett, vol. i, Index (1806–19).

Heliconius rhea, Cram., Pap. Ex., i, p. 85, 154, t. 54, f.

C. D. (1775–6).

Heliconius sara thamar, Stichel u. Riff., Tierr., vol. 22, p. 185 (1905); Stichel, Gen. Ins., Fasc. 37, p. 40 (1906).

Mr. F. W. Urich secured a specimen about the year 1905, and this is the only record. It is quite probable that in the south end of the Island the species may be not uncommon. It is worthy of note that neither the forms Heliconius sara sara nor Heliconius sara theudela, both of which occur in Venezuela, have been detected in Trinidad. The present subspecies nearest home being British Guiana.

Range. Guiana; Peru; Colombia; Écuador.

[28. Heliconius erato.]

The true *Heliconius erato* (= *Papilio vesta*, Cram. teste Stichel in Gen. Ins., Fasc. 47, p. 42) does not inhabit Trinidad. The species that "erato" stood for is *Heliconius doris*, Linn. With the typical form occur the forms *eratonius*, Stgr., and *metharmina*, Stgr.

[26. Heliconius viculata.]

Heliconius phyllis, var. viculata, Riff., Berl. Ent. Zeit., vol. 45, p. 188, 212; Gatt. Helic., vol. i, p. 6, 30 (1900).

Heliconius callycopis, forma viculata, Stichel, Berl. Ent.

Zeit., vol. 47, p. 149 (1901).

I very much doubt if this is a good subspecies and whether it is not a form only of *Hel. hydara*. In Trinidad TRANS. ENT. SOC. LOND. 1913.—PART III. (JAN.) O O

viculata cannot be a distinct subspecies, and it should be treated as an aberration of *Hel. hydara*. Locally elsewhere the form becomes tolerably constant.

[27. Heliconius ricini.]

As pointed out by Riffarth in Gatt. Helic., vol. i, p. 13, 1907, this species should be placed in the genus *Eueides*. It is locally common and according to Chenu the larva feeds on the castor oil plant.

[30. Eueides isabella.]

This species (isabella recte) occurs in the typical form as described and figured by Cramer, and also as an aberration as the form huebneri, Ménét. = dynastes, Feld. Many specimens of isabella can be taken to only an odd one or two huebneri. It is practically certain that all are the same species as intergrades occur.

Subfamily NYMPHALINAE.

[32. Colaenis Phaerusa.]

This species has been taken by Mr. P. L. Guppy, jun., thus confirming the record.

METAMORPHA DIDO.

Papilio dido, Linn., Syst. Nat., i, p. 782 (1758).
Colaenis dido, Bates, Journ. Ent., ii, p. 186.
Metamorpha dido, Hübn., Verz. bek. Schmett-, p. 43.
Metamorpha dido, Godm. and Salv., Biol. Cent. Am., i, p. 166; ii, p. 670.

Range. NICARAGUA to S. BRAZIL (Rio Janeiro).
Recorded by Mr. Lechmere Guppy in Trin. Field Nat.
Slub. G. E. Tryhane secured one or two examples in 906. The species is evidently rare in the Island.

EUPTOIETA HEGESIA.

Papilio hegesia, Cram., Pap. Ex., t. 209, f. E. F. (1782).Euptoieta hegesia, Staud. and Schatz, Ex. Schmett, i, pl. 36; ii, p. 118.

Euptoieta hegesia, Godm. and Salv., Biol. Cent. Am., i, p. 175; ii, p. 671.

Range. Central America to Colombia and Lower AMAZONS; WEST INDIES.

A specimen in Mr. H. J. Adams' collection from Tunapuna.

Cynthia cardui.

Papilio cardui, Linn., Faun. Suec., p. 276, n. 1054 (1761).

Range. Almost the whole world.

Three specimens were secured in 1912 by Mr. P. L. Guppy on the Queen's Park, Savannah, and one at St. Joseph.

PHYCIODES IANTHE.

Papilio ianthe, Fab., Spec. Ins., ii, p. 80, n. 354. (1781). Eresia myia, Hew., Ex. Butt., iii, t. 3, f. 16, 17 (1864).

Range. Venezuela; Colombia; Ecuador; Honduras. The only specimen I have seen was one taken by Mr. P. L. Guppy, jun., at Tunapuna. It is a very large individual with an exceptionally wide expanse of wing.

[39. CHLOSYNE SAUNDERSII.]

Synchloe saundersii, Doubl. and Hew., Gen., D. L., t. 24, p. 2 (1847).

Synchloe mediatrix, Feld., Reise Nov., Lep., iii, p. 395, n. 583 (1867).

Araschnia lacinia, Hübn., Zutr. Ex. Sch., p. 899, 900 (1837).

Synchloe tellias, Bates, Ent. Mo. Mag., i, p. 84, n. 42 (1864).

Chlosyne lacinia saundersii, Kaye.

Range. MEXICO to PARAGUAY.

Dr. G. B. Longstaff took one specimen of the species at

St. Juan on April 2, 1907.

This species divides up with difficulty into geographical races, but as some Paraguay and Southern Brazilian specimens are in no way different from Trinidad examples I treat the species as a unit.

EUNICA ORPHISE.

Papilio orphise, Cram., Pap. Ex., i, t. 42, E. F. (1776).

Range. Colombia; Venezuela; Guiana; Amazons. 1 & Feb. 1901 (A. Hall) near Port of Spain.

EUNICA MALVINA.

Eunica malvina, Bates, Journ. Ent., ii, p. 195, n. 21, t. 9, f. 2, 2a (1864).

Range. Brazil, Amazons.

Mr. P. L. Guppy, jun., has secured two 33 at Tunapuna, one of which he has kindly presented for my own collection. Sir Gilbert Carter has taken the species at the Pitch Lake.

DYNAMINE SETABIS.

Dynamine setabis, Doubl. and Hew., Gen. D. L. t. 30, f. 2 (1849).

Range. Venezuela; Colombia; E. Peru. Ariapita Road, Dec. 1911, Miss M. E. Fountaine, two & &.

DYNAMINE ARENE.

Dynamine arene, Hübn., Samml. Ex. Schmett (1816–1824).
 Nymph. johanna, Godt., Enc. Méth., ix, p. 420, n. 221 (1823).

Range. Brazil, Lower Amazon, Pernambuco; Ecuador. Emperor Valley, Jan. 28, 1913 (K. St. A. Rogers). This is the only record, but the species is scarce.

[51. Catagramma codomannus.]

C. codomannus, Fab. (1781), falls a synonym of Catagramma astarte, Cram. 1779 (nec 1782, vide E.M.M., vol. xiv, p. 279).

Cramer's figure of *C. astarte* is rather smaller than the type specimen of *C. codomannus* in the Banksian Cabinet, but there can be no doubt the two are the same species, but with possibly subspecific rank. *C. miles*, Bates, from the Upper Amazon, and *C. stratiotes*, Feld., from Ecuador, are both subspecies of *C. astarte*.

The Trinidad insect, which also occurs on Sta. Lucia and possibly elsewhere, is rather different from any of the foregoing, and I propose calling it Catagramma astarte,

subsp. antillena.

CATAGRAMMA ASTARTE ANTILLENA (Pl. XXX, fig. 15).

Catagramma astarte, subsp. antillena, subsp. nov.

3. Smaller than astarte, with the red band of the fore-wing narrower and more pointed at costa. The red area of hind-wing less than in astarte and sharply pointed marginally. Underside of fore-wing with the red areas much reduced. Underside of hind-wing like astarte.

Exp. 351 mm., 953 mm. (C. astarte 360 mm.)

CATAGRAMMA MAIMUNA.

Catagramma maimuna, Hew., Ex. Butt., ii, Catag., t. 8, f. 62, 63 (1858).

Range. UPPER AMAZONS.

A \varphi in the collection of Mr. A. Hall, which was purchased from a local collector.

PERIDROMIA IPHTHIME.

Ageronia iphthime, Bates, Ent. Mo. Mag., i, p. 115, n. 49 (1864).

Ageronia feronia, var. iphthime, Kirby, Cat. Diur. Lep., p. 215.

Range. CENTRAL AMERICA.

Mr. A. E. Hall took this species in the Island.

MEGALURA CORESIA.

Nymphalis coresia, Godt., Enc. Méth., ix, p. 359, n. 31 (1823).

Range. CENTRAL AND TROPICAL SOUTH AMERICA. Occurs at the Pitch Lake (Sir G. Carter).

ADELPHA VELIA TRININA (Pl. XXX, fig. 2).

Adelpha velia trinina, n. s.sp.

Fore-wing very dark brown with a broad ochreous yellow band squarely indented at voin 3 internally; externally at vein 5; it is sharply cut off, and at costa there are two ochreous dots. Hind-wing very dark brown with a rather narrow, even white band. A small dark ochreous mark at anal angle. Fore-wing beneath with a conspicuous rounded black mark at tornus giving off a dark brown streak within the yellow band. Hind-wing below with the white

band bordered with brown externally followed by a wavy red line. No white marks beyond white band.

Exp. 52 mm.

The subspecies is separable from *velia* by the orange band extending to inner margin: Butler's *juruana* may be very close or even identical with *trinina*, but the condition is bad and it is impossible to say what it looked like when fresh.

The type specimen is from Diego Martin (Caracciolo).

ADELPHA PHYLACA TRINITA (Pl. XXX, fig. 1).

Adelpha phylaca trinita, n. s.sp.

Allied to A. phylaca, Bates, of which it may be a subspecies only. It is to be separated by the greatly reduced yellow area beyond the cell and by the yellow being more broken up with the veins showing very clearly within it. The yellow just beyond the cell is suffused with whitish.

Fore-wing very dark blackish brown with 5 darker blackish lines across the cell. A broad transverse white band from vein 3 to inner margin, above this a rough V-shaped area of orange, the outer arm greatly curved to costa. Hind-wing dark blackish brown with a broad white transverse band meeting the band of the fore-wing. An orange patch at tornus containing a large and a small black dot.

Exp. 59 mm.

Port of Spain (Caracciolo; W. J. Kaye).

ADELPHA MELONA.

Heterochroa melona, Hew., Ann. N. Hist., xx, p. 258, t. 20, f. 2 (1847).

Range. TROPICAL SOUTH AMERICA. St. Ann's Valley (W. J. Kaye).

Adelpha Eubaea.

Heterchroa eubaea, Feld., Reise Nov., Lep., iii, p. 422, n. 662 (1867).

Range. Guiana; Colombia; Amazons.

Kirby in his "Catalogue of Diurnal Lepidoptera," p. 234, treats this species as a var. of A. plesaure, but it cannot be looked upon as a geographical race of that species, for

A. plesaure also occurs, and it is very improbably an aberration. Frequently in S. America five and six species of Adelpha occur together, each one of which is thoroughly distinct.

Port of Spain (H. Caracciolo).

Chlorippe Laure.

Papilio laure, Dru., Ill. Ex. Ent., ii, t. 18, f. 5, 6 (1773).

Range. Venezuela; Brazil.

North of Quenam Bay, several \mathcal{J} , two \mathcal{L} (K. St. A. Rogers), Jan. 1913. It is remarkable that until the recent discovery of this fine species by Mr. Rogers its presence had been undetected.

PREPONA MEANDER.

Papilio meander, Cram., Pap. Ex., i, t. 12, f. A. B., p. 17 (1775).

Prepona meander, Fruhs., Iris, xvii, p. 278, 279.

Range. Peru; Colombia; Bolivia; Brazil.

A single example was taken by Mr. G. E. Tryhane at St. Ann's Valley, Aug.-Sep. 1905, and is now in the collection of the late Mr. H. J. Adams.

Anaea eribotes halli, (Pl. XXX, fig. 11).

Anaea eribotes halli, n. s. sp.

Fore-wing much darker ground-colour than in typical eribotes. The basal blue area reaching up to the upper discocellular. Outer margin with dark marginal band reaching to tornus. Hind-wing also with complete dark marginal band. Basal blue area extending well beyond cell. Fore-wing on underside with the basal half from apex to inner margin blackish.

Exp. 56 mm.

One of in coll. A. Hall, after whom the subspecies is named. The insect was taken at Tabaquite, and is the only specimen I have seen.

Typical eribotes occurs in Guiana and the Lower Ama-

zonian region.

EUPTYCHIA TERRESTRIS.

Euptychia terrestris, Butl., P.Z.S., p. 462, n. 7, t. 39, p. 1 (1866).

Range. Guiana; Amazons to E. Peru and S.E. Ecuador; NICARAGUA.

I have only seen one specimen of this species, viz. that one in the National Collection at S. Kensington. It was taken by S. J. Tryhane probably near Port of Spain. The species is quite possibly overlooked, but it is quite distinct from *E. myncaea*, with which it could easily be confounded.

EUPTYCHIA THEMIS.

Euptychia themis, Butl., P.Z.S., 1867, p. 104, n. 1, t. 12, f. 13.

Range. Mexico to Venezuela. One specimen in National Collection.

[78. Euptychia myncaea.]

Trinidad specimens of this species have a distinct look to those from Guiana. They are smaller and darker, and the occilated spots on the underside are usually smaller. It is possible that fresh specimens from Guiana would be as dark as the comparatively fresh Trinidad specimens, but in size there is a distinct reduction in all the specimens I have seen. I propose calling the Island form Euptychia myncaea, subsp. isolata.

EUPTYCHIA PALLADIA.

Euptychia palladia, Butl., P.Z.S., 1866, p. 461, n. 6, t. 39, f. 21.

Range. Brazil.

A specimen in the National Collection.

Family ERYCINIDAE.

Subfamily EUSELASIINAE.

[94. Helicopis elegans.]

This species is probably a local form only of *Helicopis selene*, Feld. The underside agrees exactly. It would be exceedingly interesting to have a 3 from Trinidad to see if that also differed from typical 3 selene. 4 selene frequently shows some orange scaling about the black band of the hind-wing in both 3 and 4, but more in the 4 than in the 4. The Trinidad insect has the yellow scales developed and the black scaling suppressed. It should

be considered a subspecies of H. selene and called Helicopis selene, subsp. elegans.

HELICOPIS CUPIDO.

Papilio cupido, Linn., Syst. Nat., i, 482, No. 145 (1758). Helicopis cupido, Mengel, Cat. Eryc., p. 56.

In the South end of the Island at Cedros (F. Birch, Feb. 6, 1905).

Range. Guiana; Lower Amazons.

MESOSEMIA MAERA.

Mesosemia maera, Hew., Ex. Butt., v, t. 12, p. 114, 115 (1873).

Mesosemia maera, Mengel, Cat. Eryc., p. 51 (1905).

Range. Brit. Guiana.

The species was described from a Trinidad specimen. Mr. G. E. Tryhane has found it not rarely in St. Ann's Valley.

MESOSEMIA IBYCUS.

Mesosemia ibycus, Hew., Ex. Butt., ii, t. 7, f. 68, 69 (1860).

Mesosemia ibycus, Mengel, Cat. Eryc., p. 48 (1905).

Range. Guiana; Upper and Lower Amazon.

Rather rare, but possibly very local, as are so many of the genus.

SYRMATIA DORILAS.

Papilio dorilas, Cram., Pap. Exot., i, t. 47, C. (1779). Syrmatia dorilas, Mengel, Cat. Eryc., p. 65.

St. Ann's Valley (F. W. Urich).

Range. Brazil as far south as Sta Catharina.

NOTHEME EUMEUS.

Papilio eumeus, Fab., Spec. Ins., ii, 63, No. 280 (1781). Notheme eumeus, Staud. and Schatz, Ex. Schmett, ii, 242, pl. 41 (1892).

Notheme eumeus, Mengel, Cat. Eryc., p. 67 (1905).

Range. Guatemala to the Amazons.

One specimen from St. Ann's Valley (G. E. Tryhane).

XENANDRA HELIODES.

Xenandra heliodes, Hopp., Stett. Ent. Zeit., 444 (1869). Xenandra heliodes, Mengel., Cat. Eryc., p. "67" (recte 76).

Range. Demerara; Brazil; I. of Marguerita; Venezuela.

St. Ann's Valley (G. E. Tryhane). 1 \circlearrowleft Coll. Kaye; 1 \circlearrowleft Coll. Adams.

The species is always rare.

Stichel in "Gen. Ins. Riodinidae," p. 221, makes this species synonymous with X. helius, but the two insects are distinct

XENANDRA HELIUS.

Papilio helius, Cram., Pap. Ex., iii, t. 198, B. (1780). Xenandra heliodes, Mengel, Cat. Eryc., p. "67" = 76. Xenandra helius, Mengel, Cat. Eryc., p. "67" = 76.

Range. Venezuela; I. of Marguerita; Guiana; Amazon.

Mr. G. E. Tryhane has secured several specimens of this species in St. Ann's Valley. Ariapita Road, Dec. 1911, Miss M. E. Fountaine.

SYMMACHIA PROGNE.

Symmachia progne, Godm., Trans. Ent. Soc., p. 537, pl. xxi, f. 10 (1903).

A male of this species was taken in St. Ann's Valley, and is now in Mr. H. J. Adams' collection. The female has the transverse bands on the underside more heavily spotted.

Symmachia sagitta, (Pl. XXX, fig. 13).

Symmachia sagitta, n. sp.

Allied to S. menetas, from which it differs in the white apical markings, the outermost of which is usually shaped like a blunt arrow head.

Fore-wing black at base followed by a very oblique red streak, beyond which is a large black area containing usually three, sometimes four, conspicuous white streaks and dashes. Hind-wing black at base and with the apex black. The whole of the central area bright crimson. Cilia black and a very slender black submarginal line. The extreme margin of the wing red. Abdomen with a white belt at base followed by a broad black belt, the remainder red,

Exp. 26 mm,

[108. Cricosoma coccineata.]

This species falls as a synonym to *Pachythone lateritia*, Bates, Journ. Linn. Soc. Zool., ix, 390 (1868). There are five specimens of this insect in the Godman collection from Aunai, Essequibo, and the upper Amazon. All five are much more heavily spotted than the two Trinidad examples, but the spots are in exactly the same positions and the undersides are extremely alike. The synonymy, therefore, reads:—

Pachythone lateritia, Bates, Journ. Linn. Soc. Zool., ix, 390.

Pachythone lateritia, Mengel, Cat. Eryc., p. 90. Lemonias coccineata, Mengel, Cat. Eryc., p. 118 (1905). Cricosoma coccineata, Kaye, Trans. Ent. Soc., p. 185 (1904).

MESENE MONOSTIGMA.

Emesis monostigma, Erichs., Schomb. Reise, iii, 601 (1848).

Mesene monostigma, Mengel, Cat. Eryc., p. 87 (1905). Mesene hya, Doubl. and Hew., Gen. D. L., t. 70, f. 9, ♀ (1851).

Range. Guiana; Amazon.

Mr. F. Birch took two specimens, both 3, near Port of

Spain on Oct. 16, 1904.

The \mathcal{Q} , with much more red on the fore-wing, was described and figured by Doubleday and Hewitson as a distinct species under the name M. hya.

MESENE SIMPLA (Pl. XXX, figs. 9, 10).

Mesene simpla, n. sp.

Allied to triangularis, Thieme.

 \circlearrowleft . Fore-wing dark brown, with a median band of light orange from the middle of costa to tornus, where it slightly turns inwards to inner margin. Hind-wing unicolorous dark brown. Underside of fore-wing as above but paler. Underside of hind-wing unicolorous brown, but paler than fore-wing. The 𝔻 differs in having the yellow transverse band narrower and not reaching beyond vein 3; on its inner edge it is slightly curved. Both fore- and hind-wing are more rounded. On the underside it is more greyish-brown than in the 𝔻.

Exp. 24 mm.

Habitat. Trinidad, Maraval River, Jan. 29, 1913 (K. St. A. Rogers). Q in Coll. Oxford Museum; of in Mus. Tring.

PARNES NYCTEIS.

Parnes nycteis, Doubl. and Hew., Gen. D. L., 464, t. 73, f. 3 (1851).

Parnes nycteis, Mengel, Cat. Eryc., p. 90.

Range. Amazons; Guiana; Panama.

Mr. P. L. Guppy has taken this species rarely. The extremely small size of this Erycinid doubtless makes it very difficult to detect.

Anteros renaldus.

Papilio renaldus, Stoll, Suppl. to Cram., t. 13, f. 1, 1a (1790).

Anteros renaldus, Mengel, Cat. Eryc., p. 91.

Range. Tropical South America.

Mr. P. L. Guppy has taken a few specimens near Port of Spain.

SAROTA CHRYSUS.

Papilio chrysus, Cram., Pap. Ex., iv, t. 380, D. E. (1782). Sarota chrysus, Mengel, Cat. Eryc., p. 95.

Helicopsis dematria, Doubl. and Hew., Gen. D. L., t. 71, f. 10 (1851).

Anteros dematria, Mengel, Cat. Eryc., p. 91.

Range. Central and South Tropical America.

Mr. G. E. Tryhane has taken several specimens of this insect in St. Ann's Valley.

CHARIS CHAONITES.

Charis chaonites, Hew., Ex. Butt., iii, t. 1, f. 7, 8 (1866). Charis chaonites, Mengel, Cat. Eryc., p. 100 (1905).

Range. Brazil, Amazon; Bolivia, Yungas.

One specimen (G. E. Tryhane) Port of Spain. A scarce species everywhere.

Charis Cleonus.

Papilio cleonus, Cram., Pap. Ex., iv, t. 380, H. I. (1782). Charis cleonus, Staud. and Schatz., Ex. Schm., ii, 248, pl. 44 (1892).

Charis cleonus, Mengel, Cat. Eryc., p. 100.

Range. Brazil, Amazons.

Not rare near Port of Spain, but less common than C. argyrodines (= gynsea) or C. avius.

CHARIS CHELONIS.

Charis chelonis, Hew., Ex. Butt., iii, t. 1, f. 9 (1866). Charis chelonis, Mengel, Cat. Eryc., p. 100.

One specimen in Mr. H. J. Adams' collection taken in St. Ann's Valley.

Range. Brazil.

CHARIS HOLOSTICTA.

Charis holosticta, Godm. and Salv., Biol. Cent. Am., ii, 703 (1901).

Charis holosticta, Mengel, Cat. Eryc., p. 104.

Two specimens taken by Mr. F. Birch at Lavenville near Port of Spain, Nov. 15, 1904. This bright yellow species is apparently always rare.

Range. NICARAGUA to VENEZUELA.

CARIA DOMITIANUS.

Hesperia domitianus, Fab., Ent. Syst., iii, 1, 315, No. 193 (1793).

Caria domitianus, Mengel, Cat. Eryc., p. 105.

Range. VENEZUELA to NICARAGUA.

La Brea in cacao plantation, Jan. 24, 1913 (K. St. A. Rogers).

BAEOTIS ZONATA.

Baeotis zonata, Feld., Verh. Zool. Bot. Ges., 469, No. 15 (1869).

Baeotis zonata, Mengel, Cat. Eryc., p. 106.

Range. Central America; Venezuela.

On flowers of black sage, Sept. 30, 1904, at Port of Spain (F. Birch).

On this occasion Mr. Birch took four specimens, but this is the only record.

LASAIA OILEUS.

Lasaia oileus, Godm., Trans. Ent. Soc., p. 541, pl. 22, f. 10, 11 (1903).

Lasaia oileus, Mengel, Cat. Eryc., p. 109.

Range. TROPICAL SOUTH AMERICA. St. Ann's Valley (G. E. Tryhane).

ANATOLE NEPOS.

Hesperia nepos, Fab., Ent. Syst., iii, 1, 340, No. 292 (1793).

Cremna orpheus, Doubl. and Hew., Gen. D. L., t. 71, f. 8 (1851).

Anatole nepos, Mengel, Cat. Eryc., p. 111 (1905).

Range. Ecuador to Southern Brazil. St. Ann's (G. E. Tryhane). Rare.

LEMONIAS PIONE.

Lemonias pione, Bates, Journ. Linn. Soc., ix, 398 (1868). Lemonias pione, Mengel, Cat. Eryc., p. 113.

Range. Guiana; Amazons.

A single \circ at Macqueripe Bay, N. Trinidad, on Jan. 1 1905 (F. Birch).

The specimen is paler yellow than the mainland form.

Lemonias emylius.

Papilio emylius, Cram., Pap. Ex., i, t. 66, G. H. (1779). Lemonias emylius, Mengel, Cat. Eryc., p. 114.

Range. Guiana.

Two males, Sept. 25, 1904 (F. Birch).

LEMONIAS RHODOPE.

Lemonias rhodope, Hew., Ex. Butt., i, Lem., t. 1, f. 6, 7 (1853).

Lemonias rhodope, Mengel, Cat. Eryc., p. 114.

Range. Amazon.

1 3, St. Ann's Valley (G. E. Tryhane).

LEMONIAS PARTHAON.

Papilio parthaon, Dalm., Anal. Ent., p. 46 (1823). Lemonias parthaon, Mengel, Cat. Eryc., p. 114.

Range. Brazil.

At Tunapuna, one specimen (P. L. Guppy).

NYMPHIDIUM LILINA.

Nymphidium lilina, Butl., Ent. Mo. Mag., vi, 252, t, 1, f. 8 (1870).

Nymphidium lilina, Mengel, Cat. Eryc., p. 127.

Range. Mexico.

A single specimen in Mr. H. J. Adams' collection taken at Tunapuna sometime in 1905.

This beautiful species is rare everywhere and specimens

are scarce in collections.

ARICORIS LAGUS.

Papilio lagus, Cram., Pap. Ex., ii, t. 117, F. G. (1779). Aricoris lagus, Mengel, Cat. Eryc., p. 130 (1905).

Range. Colombia; Guiana; Amazons.

A single male has been taken by Mr. P. L. Guppy, jun., at Camuto.

THEOPE SYNGENES.

Theope syngenes, Bates, Journ. Linn. Soc., ix, p. 409 (1868).

Theope sysgenes (!), Mengel, Cat. Eryc., p. 135.

Range. Brazil, Lower Amazon.

Two specimens in St. Ann's Valley (G. E. Tryhane).

THEOPE APHELES.

Theope apheles, Bates, Journ. Linn. Soc. Zool., ix, 405 (1868).

Theope apheles, Mengel, Cat. Eryc., p. 133.

Range. AMAZON.

THEOPE PIERIDOIDES.

Theope pieridoides, Feld., Reise Nov. Lep., ii, 292, No. 381, t. 37, f. 19, 20 (1865).

Theope pieridoides, Mengel, Cat. Eryc., p. 133.

Range. Brazil, Bahia.

One specimen at Tunapuna (P. L. Guppy).

This is a rare species in collections.

THEOPE LYCAENINA.

Theope lycaenina, Bates, Journ. Linn. Soc., ix, 406 (1868).

Theope lycaenina, Mengel, Cat. Eryc., p. 134.

Range. Lower Amazons.

Maraval in cacao plantation, Jan. 20, 1913 (K. St. A. Rogers).

Family LYCAENIDAE.

MITHRAS MAVORS.

Thecla mavors, Hübn., Zutr. Ex. Schmett, ff. 189, 190 (1818).

Range. Guiana; Brazil, Amazons.

1 ♀, St. Ann's Valley (G. E. Tryhane); 1 ♂ (Caracciolo), 1906.

BITHYS PHOENISSA.

Thecla phoenissa, Hew., Ill. D. L., p. 100, n. 117, t. 40, f. 139, 140 (1867).

Range. Brazil, Para.

One \mathfrak{P} in St. Ann's Valley (G. E. Tryhane).

CHALYBS HERODOTUS.

Hesperia herodotus, Fab., Ent. Syst., iii, 1, p. 286, n. 100 (1793).

Range. Guiana; Brazil.

 $1 \circlearrowleft 1 \circlearrowleft$, St. Ann's Valley (G. E. Tryhane).

CALLIPSYCHE BUBASTUS.

Papilio bubastus, Cram., Pap. Ex., iv, t. 332, G. H. (1782).

Tmolus eurytulus, Hübn., Samm. Ex. Schmett, ii. t. 90 (1816–1841).

Range. MEXICO to the AMAZON VALLEY.

Rather a scarce species in the Island.

CALLIPSYCHE CYDIA.

Thecla cydia, Hew., D. L., p. 160, n. 285, t. 63, ff. 433, 434 (1874).

Range. Brazil, Rio; Venezuela. One specimen in St. Ann's Valley (G. E. Tryhane). Easily confounded with Callipsyche thius.

[141. TMOLUS ECHION.]

Papilio echion, Linn., Syst. Nat., 1, 2, p. 788 (1767). Tmolus basalides, Hübn., Zutr. Ex. Schmett, f. 977, 978.

Thecla ziba, Hew., Desc. Lyc., p. 26, n. 56.

Several specimens have been taken in St. Ann's Valley, and the species is without doubt an inhabitant of the Island.

TMOLUS SIMAETHIS.

Papilio simaethis, Dru., Ill. Ex. Ent., i, t. 1, f. 3 (1773).

Range. Mexico to S. Brazil.

A single specimen in the "Adams" collection from St. Ann's Valley.

TMOLUS BITIAS.

Papilio bitias, Cram., Pap. Ex., ii, t. 104, E. (1779). Papilio syncellus, Cram., Pap. Ex., iv, t. 334, A. B. (1782).

Range. Guiana; Amazons; Central America. Found close to Port of Spain in 1904 (G. E. Tryhane). Ariapita Road, Apr. 1907 (G. B. Longstaff).

[TMOLUS UNILINEA.]

This species which I described in my Catalogue is the same as Hewitson's *Thecla philinna*.

The synonomy stands therefore:—

Thecla philinna, Hew., Desc. Lyc., p. 19, n. 43 (1868). Tmolus unilinea, Kaye, Trans. Ent. Soc., p. 192 (1904).

TMOLUS LABES, H. H. Druce, P.Z.S., p. 602, pl. xxxvi, f. 6. (1907).

This I consider to be a small $T.\ crolus\ \mathcal{J}.$ Mr. Druce compares his insect with $T.\ echion$, Linn., but as pointed out by me in the "Entomologist," 1908, p. 11, $T.\ echion$, Linn., is not synonymous with $T.\ crolus$, Cram., as he treats it.

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TMOLUS CLEON.

Papilio cleon, Fab., Syst. Ent., p. 522, n. 335 (1775). Thecla cleon, H. H. Druce, P.Z.S., p. 621 (1907).

Range. Brazil, Para, Pernambuco. Mr. Druce gives Trinidad as a locality.

TMOLUS AZUBA.

Thecla azuba, Hew., Ill. D. L., p. 154, n. 269, t. 71, f. 408, 409 (1874).

Thecla serapio, Godm. and Salv., Biol. Cent. Am., Lep. Rhop., vol. ii, p. 93, pl. 58, ff. 8, 9 (1887).

Range. Brazil to Panama.

St. Ann's Valley (G. E. Tryhane); Tunapuna (P. L. Guppy).

TMOLUS BADACA.

Thecla badaca, Hew., Desc. Lyc., p. 12 (1868) 3, Ill. D. L., p. 184, pl. 73, ff. 569, 570 (1877).

Thecla collucia, Hew., \hat{l} . c., p. 186, pl. 74, ff. 577, 578 (1877) \mathcal{Q} .

Thecla badaca, H. H. Druce, P.Z.S., p. 624 (1907).

Range. Colombia; Brazil. Amazons.

Emperor Valley, Jan. 30, 1913, 100–500 ft. (K. St. A. Rogers).

[TMOLUS PERDISTINCTA.]

This species described and figured by me in the former list is synonymous with *Calycopis hesperitis* (No. 156 in the Catalogue, 1904). The *Thecla cabiria*, Hew., is also synonymous. The synonymy reads:—

Calycopis hesperitis, Butl. and Druce, Cist. Ent., i, p. 107 (1872).

Tmolus perdistincta, Kaye, Trans. Ent. Soc., p. 194, pl. xviii, f. 8 (1904).

Thecla cabiria, Hew., Ill. D. L., p. 195, n. 388, t. 77, ff. 623, 624 (1877).

TMOLUS COLLUSTRA.

Thecla collustra, H. H. Druce, P.Z.S., p. 600, pl. xxxv, f. 15 (1907)

Range. Unknown. Caparo, W. Central Trinidad (F. Birch).

TMOLUS VESULUS.

Papilio vesulus, Cram., Pap. Ex., iv, t. 340, J. K. (1782).

Range. Guiana.

Not uncommon near Port of Spain. Feb. 3, 1913 (K. St. A. Rogers).

Maraval (G. E. Tryhane).

TMOLUS POLITUS.

Thecla politus, H. H. Druce, P.Z.S., p. 625, pl. xxxvi, ff. 22, 23 (1907).

Range. Guatemala to Brazil. I consider this to be a form of T. beon.

TMOLUS AZIA.

Thecla azia, Hew., Ill. D. L., p. 144, n. 245 (1873).

Range. MEXICO to the AMAZON VALLEY.

A series in Mr. H. J. Adams' collection from St. Ann's Valley.

TMOLUS PHRUTUS.

Bithys phrutus, Hübn. Zutr. Ex. Sch., ff. 703, 704 (1832).

Range. GUIANA.

One specimen from St. Ann's Valley (G. E. Tryhane). Easily overlooked from its diminutive size.

TMOLUS IODINUS (Pl. XXX, fig. 12).

Tmolus iodinus, n. sp.

Fore-wing dark iron blue with the costa and outer margin rather narrowly blackish. Hind-wing similar; anal angle with a very dark red irregular spot bordered with black. A small tail-like projection at the termination of vein 3, and a much longer one at vein 2. Each of these is tipped with white. Celia black except at anal angle, where it is whitish. Underside of fore-wing brown, very dark in the basal third and palest in central area. A straight red line runs from costa two-thirds from base to vein 2. A subterminal blackish line. Underside of hind-wing coloured as in forewing. A red line from costa two-thirds from base to vein 2; it is then continued as a wavy white line forming a letter W. Red

spots with black centres at anal angle and between veins 2 and 3, close to outer margins.

Exp. 33 mm.

1 & in British Museum taken by S. J. Tryhane probably near Port of Spain.

CALYCOPIS ATRIUS.

Thecla atrius, H.-S., Samm. Schmett, p. 55, ff. 53, 54 (1853).

Range. Guatemala to the Amazons Valley. Taken by Mr. F. Birch at Macqueripe Bay, Jan. 1905.

CALYCOPIS CINNIANA.

Thecla cinniana, Hew., Ill. D. L., p. 189, n. 369, t. 75, ff. 593, 594 (1877).

Range. Amazons.

Ariapita Road, cacao plantation, Jan. 9, 1913 (K. St. A. Rogers).

Rekoa dolylas.

Papilio dolylas, Cram., Pap. Ex., ii, t. iii, B. C. (1779). Pseudolycaena spurius, Feld., Reise Nov. Lep., ii, p. 250, n. 294, t. 31, p. 23, 24 (1865).

Range. Guiana; Amazons.

Ariapita Road, April 1907 (G. B. Longstaff).

Family PAPILIONIDAE.

Subfamily PIERINAE

ENANTIA LICINIA ACUTIPENNIS.

Papilio licinia, Cram., Pap. Ex., ii, t. 153, E. F. (1779). Leptalis licinia, Bates, Journ. Ent., i, p. 234, n. 13 (1861).

Dismorphia acutipennis, Butl., A. M. N. H., p. 26 (1899).

Range. Amazons; Guiana.

This species is a local race of E. licinia in which the wings

are markedly narrower.

Waterworks, Maraval, Dec. 19, 1906 (G. B. Longstaff); St. Ann's Valley (G. E. Tryhane); Sta Cruz Valley, Nov. 7, 1904 (F. Birch).

[182. Sphaenogona gratiosa.]

Add as synonym:--

Sphaenogona semiflava, Butl., A. M. N. H. (4), xv, p. 396, n. 1 (1875).

[185. Daptonoura Polyhymnia.]

The insect found in Trinidad agrees better with the true *lycimnia*, Cramer. D. polyhymnia is only a geographical form of the same species.

ITABALLIA DEMOPHILE.

Papilio demophile, Linn., Syst. Nat., i, p. 761, n. 82 (1767).

Perrhybris demophile, Kirby, Cat. Lep. Diurn., p. 478. Itaballia demophile, Röber in Seitz Macro-Lep., Div. II, vol. v, p. 63 (1909).

Range. TROPICAL SOUTH AMERICA. 1 3, St. Joseph River in June (F. Birch).

PERRHYBRIS MALENKA.

Pieris malenka, Hew., Ex. Butt., i, t. 1, f. 5, 6 (1852).

Range. Venezuela.

Two \circlearrowleft from Erin on the south coast, Feb. 3, 1905, (F. Birch); 1 \circlearrowleft 1 \circlearrowleft , St. Joseph River, June 23, 1907 (P. L.

Guppy, jun.).

All the females seen are more yellow than specimens from the mainland, indicating either a direct influence of climate, or possibly the influence of the distasteful and abundant *Tithorea megara*.

Subfamily PAPILIONINAE.

Papilio sesostris sesostris.

Papilio Eques Trojanus sesostris, Cram., Pap. Ex., iii. p. 34, t. 211, f. F. G. (1779).

Papilio sesostris sesostris, Roths. and Jord., Nov. Zool., vol. xiii, p. 461 (1906).

Range. Orinoco to Bolivia.

Near the Pitch Lake (Sir G. Carter). In the deuse shore forest between Irois and Cap de Ville, Feb. 7, 1905 (F. Birch)

[194. Papilio Zeuxis.

195. Papilio cymochles.]

These two insects in the Catalogue, p. 206, are the same species, viz. cymochles. Rothschild and Jordan in their revision of the American Papilios (Nov. Zool., xiii, No. 3), treat cymochles, Doubl., as a subspecies of anchises, Linn. The Trinidad insect should therefore stand as Papilio anchises cymochles.

[196. Papilio gargasus.]

In Rothschild and Jordan's revision of the S. American Papilios (Nov. Zool., xiii, p. 502) the synonymy of this species is discussed at some length, and the name adopted for the species is *neophilus*, of which the Trinidad race is made a subspecies under the name *parianus*. The insect should, therefore, be known as *Papilio neophilus parianus*.

Papilio belus varus.

Papilio varus, Koll., Denk. K. Ak. Wiss. Math.-Nat.,
 Cl. 1, p. 354, n. 8, t. 42, f. 3, 4, ♀ (1850).
 Papilio belus varus, Roths. and Jord., Nov. Zool., xiii,
 p. 529 (1906).

Range. Guatemala to Venezuela. Near the Pitch Lake (I. A. Potter).

Papilio protesilaus archesilaus.

Papilio archesilaus, Feld., Verh. Zool. Bot. Ges. Wien., xiv, p. 301, n. 180, p. 345, n. 89 (1864).

Papilio protesilaus archesilaus, Roths. and Jord., Nov. Zool., xiii, p. 717 (1906).

Range. Colombia; N. Venezuela; W. Ecuador.

Presumably this species has only been seen high up on Mt. Tucuche by Sir G. Carter and others, and as far as I know it has not been captured. It is possible that the species seen may have been a form of *P. agesilaus* with the red band on the underside of the hind-wing on the "inside" of the black band.

[199. Papilio thoas.]

Papilio thoas nealces, Roths. and Jord., Nov. Zool., xiii, p. 558.

Range of the subspecies. NICARAGUA to W. ECUADOR; eastwards to Trinidad and Lower Orinoco (Roths. and Jord.).

Family HESPERIDAE.

Subfamily PYRRHOPYGINAE.

Mysoria venezuelae.

Venezuelae, Scudder, Rep. Peab. Acad., vi, p. 67 (1872).

Range. VENEZUELA.

St. Ann's Valley (G. E. Tryhane). Behind Botanical Gardens, April 11, 1907 (G. B. Longstaff).

Subfamily HESPERIINAE.

EPARGYREUS TALUS.

Papilio talus, Cram., Pap. Ex., ii, t. 176, D. (1779). Range. Peru; Demerara; Haiti.

MELANION HEMES.

Papilio hemes, Cram., Pap. Ex., ii, t. 103, F. (1779).

Range. PERU to GUIANA.

Two specimens from Trinidad in Mr. H. J. Adams' collection.

TELEGONUS PARMENIDES.

Papilio parmenides, Cram., Pap. Ex., iv, t. 364, E. F. (1782).

Range. Guiana; Brazil, Amazon.

A rare species, and but a single record for the Island. St. Ann's Valley (G. E. Tryhane).

PHOCIDES DISTANS.

Erycides distans, H.-S., Prod. Syst. Lep., iii, p. 60, n. 4 (1869).

Range. Costa Rica to Paraguay. St. Ann's Valley (G. E. Tryhane).

574 Mr. W. J. Kaye's additions and corrections to

NASCUS CAEPIO.

Telemiades caepio, H.-S., Prod. Syst. Lep., iii, p. 68, n. 2 (1869).

Range. Venezuela.

St. Ann's Valley (G. E. Tryhane).

Bungalotis sebrus.

Eudamus sebrus, Feld., Reise Nov., Lep., iii, p. 509, n. 885, t. 71, f. 1 (1867).

Eudamus peliguus, Hew., Desc. Hesp., p. 16, n. 28 (1867). Eudamus gonatas, Hew., Desc. Hesp., p. 15, n. 27 (1867).

Range. TROPICAL SOUTH AMERICA.

This very variable species has only occurred once, and as it is a large and conspicuous insect and not easily overlooked it is probably scarce. Its near relative, *B. midas*, has only been taken singly, but on several occasions.

CECROPTERUS AUNUS.

Papilio aunus, Fab., Spec. Ins., ii, p. 134, n. 618 (1781).Papilio brontes, Fab., Mant. Ins., ii, p. 87, n. 791 (1787).

Range. Brazil.

Taken by Dr. G. B. Longstaff.

Celaenorrhinus eligius.

Papilio eligius, Cram., Pap. Ex., iv, t. 354, H. (1782).

Range. Tropical South America. St. Ann's Valley (G. E. Tryhane).

EANTIS THRASO.

Urbanus vetus thraso, Hübn., Samml. Ex. Schmett (1806–1816).

Range. Guiana.

Taken by Mr. Caracciolo, 1906.

Subfamily PAMPHILINAE.

VEHILIUS VENOSUS.

Apaustus venosus, Plötz, Stett. Ent. Zeit., p. 160 (1884). Vehilius venosus, Godm., Biol. Cent. Am., ii, p. 591, pl. C, ff. 47–49.

Range. Guatemala to Guiana. Maraval, April 1907 (G. B. Longstaff).

PAMPHILA MISERA.

Pamphila misera, Schaus, P.U.S. Nat. Mus., xxiv, p. 456 (1902).

Range. Brazil, Petropolis. One of from St. Ann's Valley (G. E. Tryhane).

CATIA PUSTULA.

Thymelicus pustula, Hübn., Zutr. Ex. Schmett, ff. 625, 626 (1832).

Range. Southern United States; Central America. One 3 in Mr. H. J. Adams' collection from St. Ann's Valley.

EUROTO COMPTA.

Pamphila compta, Butl., Trans. Ent. Soc., p. 152 (1877). Range. Colombia; Guiana; Brazil, Amazon; Panama. St. Ann's Valley (W. J. Kaye, G. E. Tryhane).

EUROTO HYPERYTHRUS.

Euroto hyperythrus, n. sp.

Fore-wing dark reddish brown. Two hyaline post discal dots and two larger dots between veins 2, 3 and 3, 4, just below cell. On the underside the costa broadly reddish. The outer marginal area pale brown, the base and the cell darker brown. Hind-wing above dark reddish brown without marks. On the underside with the whole of the central area reddish.

Exp. 28 mm.

Near Port of Spain, June 1898 (W. J. Kaye).

EUROTO SIMPLISSIMA (Pl. XXX, fig. 8).

Euroto simplissima, n. sp.

Palpi, head and thorax brownish ochreous. Fore-wing brownish ochreous. Between veins 2, 3 close to the cell is a small white elongated spot. Between veins 3, 4 is a rounder white spot. Three minute white dots in line one below another from costa before apex. The lowest just above vein 6. Hind-wing with

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ground-colour as fore-wing but with costa much darker. Fore-wing below with the costa and apical area brownish ochreous, the inner portion of the wing blackish with tornus paler. The spots on upperside all show through on underside except the central dot near costa. Underside of hind-wing unicolorous brownish ochreous.

Exp. 32 mm.

Habitat. Trinidad, Emperor Valley, Feb. 3, 1913 (K. St. A. Rogers).

EUROTO COCOA (Pl. XXX, fig. 5).

Euroto cocoa, n. sp.

Fore-wing dark brownish black with the base and midway along costa dark golden scaled. Between veins 2, 3; 3, 4; and 4, 5, are respectively three yellowish hyaline spots the first or lower of which is the largest; as a continuation of this line of spots are two points just below the costa. Hind-wing as fore-wing but considerably more scaled with greenish golden scales. Underside of fore-wing with the broad inner marginal area blackish; the costa brownish. Cilia near tornus conspicuously paler than rest of outer margin. Underside of hind-wing brownish, and slightly iridescent. A postmedian row of very ill-defined paler spots. Abdomen beneath with double longitudinal white stripes.

Exp. 34 mm.

Habitat. TRINIDAD, Port of Spain, Maraval River, Jan. 29, 1913 (K. St. A. Rogers).

Phanis sylvia, n. sp. (Pl. XXX, fig. 14).

Phanis sylvia, n. sp.

Antennae black, the joints indicated with small golden marks. Frons with some golden scaling. Second joint of palpi orange and black. Fore-wing very dark brownish black. A white semi-transparent rectangular spot between veins 2, 3 not far from end of cell; a similar but more square-shaped spot between veins 3, 4, placed further from the cell. Three minute points one below another from costa inwards. Hind-wing above unicolorous brownish black; below the veins showing clearly pale brownish on a pale purplish brown ground; a series of elongated grey spots between the veins midway between cell and outer margin. Underside of abdomen whitish.

Exp. 30 mm.

Habitat. Trinidad, St. Ann's Valley (G. E. Tryhane).

COBALOPSIS MUSA (Pl. XXX, fig. 6).

Cobalopsis musa, n. sp.

Collar golden green. Palpi yellowish beneath. Frons and thorax dark bronze green. Abdomen dark brown. Fore-wing brownish black. Two small dots, the lower one wedge-shaped, and placed immediately below the upper one, well within the cell. A large rectangular white spot between veins 2, 3, and a smaller spot between veins 3, 4. A small indistinct spot placed on vein 1 a little beyond the middle. A spot below vein 6 and a minute point just above. Hind-wing unicolorous brownish black. Underside of fore-wing as above except for a large shaded white area near tornus. Hind-wing below with a white spot within the cell and a row of six white spots beyond the middle following the curve of the outer margin.

Exp. 35 mm.

Habitat. Trinidad, Emperor Valley, Jan. 29, 1913 (K. St. A. Rogers); in coll. Kaye from St. Ann's Valley (G. E. Tryhane).

EUTYCHIDE OCHUS.

Eutychide ochus, Godm., Biol. C. Am., Rhop., ii, p. 546, pl. xci, ff. 14–16 (1900).

Range. Guiana; Lower Amazon. St. Ann's (G. E. Tryhane).

EUTYCHIDE CINGULICORNIS.

Cobalus cingulicornis, H.-S., Prod. Syst. Lep., iii, n. 52 (1869).

Range. Guatemala to the Amazons. St. Ann's (G. E. Tryhane).

MNASALCAS UNIFORMIS.

Pamphila uniformis, Butl. and Druce, Cist. Ent., i, p. 113 (1872).

Range. Costa Rica.

METISCUS ATHEAS.

Metiscus atheas, Godm., Biol. C. Am., Rhop., ii, p. 363, pl. c, ff. 20, 21 (1900).

Range. Costa Rica to Venezuela.

In coll. H. J. Adams from St. Ann's Valley (G. E. Tryhane).

Papias microsema.

Papias microsema, Godm., Biol. C. Am., Rhop., ii, p. 560 pl. c, ff. 14, 15 (1900).

Range. Brazil.

St. Ann's Valley (G. E. Tryhane).

CYMAENES MALITIOSA.

Goniurus malitiosa, H.-S., Corresp. Blatt. Regens., xix, p. 54, n. 11 (1865).

Range. Cuba.

Recorded by Crowfoot.

CYMAENES PERICLES.

Pamphila pericles, Mösch., Verh. Zool. Bot. Ver. Wien, xlviii, p. 218 (1878).

Range. Venezuela; Colombia. St. Ann's Valley (G. E. Tryhane).

Cabaris Potrillo.

Thanaos potrillo, Lucas, Sagra, Hist. Cuba, p. 641 (1856).

Range. Colombia; Venezuela; Jamaica; C. America. St. Ann's (G. E. Tryhane).

S. American specimens have the spots reduced in size and often in number.

MEGISTIAS LABDACUS.

Megistias labdacus, Godm., Biol. C. Am., Rhop., ii, p. 572, pl. C, ff. 6, 7 (1900).

Range. Central America and Venezuela.

St. Ann's Valley (G. E. Tryhane).

MNASITHEUS SIMPLICISSIMA.

Pamphila simplicissima, H.-S., Corresp. Blatt. Regens., p. 159 (1870).

Cobalus nigritulus, Mab., Compt. Rend. Soc. Ent. Belg., xxvii, p. lxii.

Range. MEXICO to VENEZUELA.

Botanical Gardens, June 1901 (W. J. Kaye).

PHLEBODES TIBERIUS.

Apaustus tiberius, Mösch., Verh. Zool. Bot. Ges. Wien, p. 329 (1882).

Range. Panama; Guatemala; Colombia; Mexico. In coll. H. J. Adams from St. Ann's Valley (G. E. Tryhane).

PERIMELES REMUS.

Hesperia remus, Fab., Ent. Syst., Supp., p. 434 (1798). Range. Guiana; Ecuador; Venezuela to Mexico. Ariapita Road, 800 ft., April 1907 (G. B. Longstaff).

PRENES NYCTELIUS.

Hesperia nyctelius, Latr., Enc. Méth., ix, p. 746, n. 47 (1823).

Range. Brazil.

Maraval (G. B. Longstaff), Dec. 19, 1906. Not rare (W. J. Kaye).

ONOPHAS COLUMBARIA.

Pamphila columbaria, H.-S., Corresp. Blatt. Regens., p. 159 (1870).

Range. Brazil.

In coll. H. J. Adams.

NYCTUS TRIANGULARIS (Pl. XXX, fig. 7).

Nyctus triangularis, n. sp.

Collar golden. Fore-wing dull brown, the costa paler brown. Inner margin basal two-thirds yellowish brown. A yellowish subhyaline trapezoidal spot within the cell. Larger spots between veins 1, 2; 2, 3; 3, 4; a small spot between veins 4, 5. Two small adjacent spots between 6, 7 and 7, 8. Hind-wing with three small spots placed transversely.

Exp. 42 mm.

St. Ann's Valley (G. E. Tryhane).

FLACILLA AECAS.

Papilio aecas, Cram., Pap. Ex., iv, t. 343, A. B. (1782). Range. Brazil, Amazons; Guiana.

CALLIMORMUS FILATA.

Apaustus filata, Plotz, Stett. Ent. Zeit., p. 158 (1884).

Range. GUIANA; VENEZUELA; AMAZONS.

St. Ann's Valley (G. E. Tryhane).

CALLIMORMUS CORADES.

Ancyloxypha corades, Feld., Verh. Zool. Bot. Ges., xii, p. 477, n. 66 (1862).

Range. Mexico to S. Brazil. St. Ann's Valley (G. E Tryhane).

ATRYTONE NOCTIS (Pl. XXX, fig. 16).

Atrytone noctis, n. sp.

Head and collar dark golden brown. Fore-wing dark golden brown with some dark golden scaling especially on basal half of costa. Inner margin narrowly golden on basal half. A little golden scaling beyond cell. Hind-wing coloured as fore-wing with dark golden hairs. Cilia pale yellowish becoming golden at anal angle. Underside of fore-wing black with costa and very broad apex pale yellowish green. A pale yellow portion of a band below the pale apex. Underside of hind-wing uniformly pale yellowish green with faint indication of a yellowish band.

Exp. 28 mm.

St. Ann's Valley (G. E. Tryhane).

COBALOPSIS ROGERSI (Pl. XXX, fig. 3).

Cobalopsis rogersi, n. sp.

Head, thorax and abdomen shot dark bronze green. Fore-wing dark blackish brown. Three white dots arranged in a curve beyond end of cell near apex. A large angular white spot between veins 2, 3, lying close to cell. A smaller square white spot between veins 3, 4, lying further from the cell. Underside of fore-wing with the base very dark blackish, the outer margin and the area just beyond end of cell brownish. Underside of hind-wing with the central area of wing the darkest, the margin paler. Underside of abdomen with two narrow white stripes.

Exp. 40 mm.

Habitat. Trinidad, Emperor Valley, Jan. 28, 1913 (K. St. A. Rogers).

PADRAONA TRYHANA (Pl. XXX, fig. 3).

Padraona tryhana, n. sp.

Antennae with the shaft ringed black and orange, the tip black above and orange beneath. Palpi beneath pale yellow with a few black hairs; above the second joint is velvety black. Head, thorax and abdomen, clothed with dark golden scales. Fore-wing deep golden; the broad outer margin blackish and an irregular mark joining the band near apex and running to base of wing also blackish. Along vein 2 the marking is extended outwards; lying within the cell in the centre of the dark irregular patch is a small orange spot. Hind-wing dark golden with the costal half blackish extending inwards to inner margin and outwards and downwards to form an outer margin but terminating abruptly in an irregular patch. Anal angle wholly orange.

Exp. 34 mm.

Habitat. Trinidad, St. Ann's Valley (G. E. Tryhane).

VETTIUS LAUREA.

Hesperia laurea, Hew., Desc. Hesp., p. 28, n. 13 (1868). Range. Brazil.

CARYSTUS MARCUS.

Papilio marcus, Fab., Mant. Ins., ii, p. 87 (1787). Range. Panama to French Guiana. Not rare in the Island.

PERICHARES SALIUS.

Papilio salius, Cram., Pap. Ex., i, t. 68, E. (1779). Range. Guiana. St. Ann's Valley, not rare (W. J. Kaye).

PARAIDES ANCHORA.

Hesperia anchora, Hew., Trans. Ent. Soc., p. 487, n. 3 (1866).

Range. Brazil, Amazon.

A very rare species in collections, but one which is at once recognisable by the central silver spot on the underside of the hind-wing.

Near Port of Spain (H. Caracciolo).

ADDENDA TO THE FAMILY HESPERIDAE.

* Myscelus rogersi, n. sp.

Intermediate between *oethrus*, Hew., and *phoronis*, Hew., but nearer *phoronis*, from which it differs chiefly in having whitish transparent spots instead of yellow; in having the veins of the fore-wing heavily scaled with black and in the great reduction of the yellow scaling below.

Fore-wing very dark reddish brown with the costa blackish. A submedian band of three whitish transparent spots, the two uppermost of which have a straight edge on their inner margins. Between veins 3, 4; 4, 5 are two similar spots the upper one very attenuated exteriorly. Between veins 5, 6 is a smaller triangular spot. Between veins 6, 7; 7, 8 is a pair of similar spots lying close to one another with a third spot between veins 8, 9 lying apart from the other two and having its exterior edge just touching the interior edge of the paired spots. Outer margin broadly blackish. Hind-wing with ground colour as fore-wing, with a large transparent spot within the cell followed by a rather broken blackish band which is markedly dented at veins 3, 4. A narrower but much more sinuous band between this and outer margin. Hind-wing beneath with the inner half of wing lemon yellow edged with a broad black band. Outer half wholly brown except for the sinuous black band.

Exp. 57 mm.

Habitat. Trinidad, Siparia, N. of Quenam Bay, Jan. 22, 1913 (K. St. A. Rogers).

EPARGYREUS ASANDER, Hew. Emperor Valley, Jan. 8, 1913.
EANTIS BUSIRIS, Cram. Siparia, Jan. 13, 1913.
PYTHONIDES LUCULLA, Hew. Emperor Valley, Jan. 1913.
PYTHONIDES PELOPEA, G. & S. Emperor Valley, Jan. 17, 1913.
ACHLYODES CALIGINEA, Mab. Emperor Valley, Jan. 1913.
CHIOMARA MITHRAX, Moesch. Emperor Valley, Jan. 1913.
EPEUS VELEDA, Godm. Emperor Valley, Jan. 1913.
MORYS CERDO, Bdv. St. Clair, Dec. 31, 1912.
PARPHORUS STORAX, Mab. Botanical Gardens, Jan. 3, 1913.

All the above ten species have been taken by Mr. K. St. A. Rogers. Prenes ocola, Edw. "Trinidad" in coll. Godman. Xeniades pteras, Godm. Chaguanas, Nov. 5, 1913 (J. L. Guppy).

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EXPLANATION OF PLATE XXX. (See Explanation facing the PLATE.)

JANUARY 21, 1914.